Phase by Phase Overview of LMS Product Implementation
(Adapted from the SFA SDLC)

Executive Summary

This Implementation Plan is a baseline for the planning and preparation necessary for the implementation of the Office of Student Financial Assistance (SFA) Learning Management System (LMS) solution. It is intended to give the SFA university team a roadmap for the implementation of the LMS product and to give the project team an overview of the implementation approach as defined in the SFA System Development Lifecycle (SDLC).

The design of this document is intended as a walk through of the process of implementing a product such as the LMS solution. The SDLC process is composed of a sequence of five phases: vision, definition, construction, deployment and support, which are divided into detailed segments. Each phase and segment has an objective; the *Objective* sections are designed to give a high-level overview of the main goals and points of the implementation process that will occur in that particular phase. The *Major Tasks* that are identified associated with execution of these phase and segment objectives. The *Deliverables* are the physical outputs of the segments and the products of the major tasks. These physical outputs may be Task Order Deliverables to the client or tools/products produced to carryout the implementation. The *Milestones* are the endpoints for a group or series of major tasks; milestones are actual achievements that major tasks are prioritized to accomplish. *Checkpoints* are activities or tasks, which upon completion can be used as landmarks or transition points within segments; checkpoints are derived from logical developments through the course of implementation, and they are visible within the project workplan. *Checkpoints* are also areas for review and approval by the project stakeholders/sponsors.

This *Implementation Plan* should be the preliminary input for the project planning in *Definition* Phase 2, but be advised that the SFA University team has not selected a solution during the drafting of this document. Once a solution is selected the actual implementation plan discussed in the *Design* Phase 3 may actually consist of two separate implementation plans, in the event that a multiple product solution is selected. Furthermore, any vendor selected will have an implementation process, which they utilize from project to project. Therefore, the actual implementation plan used by the project team will most likely be a combination of the vendor processes and this document, which was adapted from the SFA SDLC.

1 Vision Phase

Vision Phase Objective:

The objective of this phase is to understand the specific issues facing SFA, and to conduct an assessment of the possible solutions for the business case. The Vision Phase is the foundation of the LMS implementation process, and the Business Case is the primary input for the recommended solution. Although the Business Case is created and approved in this initial phase of the lifecycle, it is crucial that the development of the solution in subsequent phases tie back to the Business Case. The requirements must meet the objectives stated in the Business Case, the design must meet the requirements, the development must meet the design, the testing must verify the design and validate the requirements, and the deployment must satisfy the objectives as outlined in the Business Case.

1.1 *Requirements Analysis* Segment 1

1.1.1 Objective:

This segment of work involves working with SFA University, the Channels and the Enterprise Units to identify the functional and technical needs to manage training administration and delivery. In addition, the Modernization Partner and SFA will identify the technical requirements for integration of the LMS solution with other planned or existing SFA systems.

1.1.2 Major Tasks:
- Identify and confirm functional requirements to be provided by the LMS, and to differentiate between the requirements for internal employees versus external customers
- Identify technical and implementation requirements for the LMS to integrate with other planned and/or existing SFA systems
- Evaluate enterprise-wide use of the LMS to support all Channels; for example the LMS may also support conference registration
- Identify customizations required to provide SFA specific functionality, identity and data integrity

1.1.3 Deliverables:
- Functional, Technical, Business Requirements [general comprehensive requirements, not to be confused with the detail design documents in the Constructions Phase (Functional Specifications Document and Technical Specifications Document)]

1.1.4 Milestones:
- Functional and Technical Requirements are confirmed and have been signed off

1.1.5 Checkpoints:
- Functional, Technical and Business Requirements Delivered and Reviewed
- SFA Changes incorporated

- Sign-off on Functional, Technical and Business Requirements

1.2 Request for Information (RFI) Segment 2

1.2.1 Objective:

A request for information (RFI) is developed using the requirements that were determined in the first segment *Requirements Analysis.* The RFI provides vendors with background on SFA, SFA University, and their business and functional requirement needs for an LMS. Each requirement was restated in a question form for the vendors to answer. The RFI requested that the vendors responding also include costs, financial data, references, and a sample implementation plan.

1.2.2 Major Tasks:

- Create the Request for Information
  - o Vendor Packet
  - o Functional, Technical and Business Requirements
  - o 508 Requirements (provided by the Department of Education)
- Research industry best in business
- Select highest rated vendors based on research

1.2.3 Deliverables:

- Vendor Short List
- Request for Information (RFI)

1.2.4 Milestones:

- Distribute hard and soft copies of the Request for Information (RFI) to the vendors

1.2.5 Checkpoints:

- Vendor short list submitted and reviewed
- Request for Information submitted and reviewed

1.3 Vendor Evaluation/Solution Selection Segment 3

1.3.1 Objective:

This segment of work involves analyzing and selecting an LMS provider based on the requirements identified. Vendors are evaluated against established criteria to determine an objective score.

1.3.2   Major Tasks:

- Prepare Vendor Scorecard
- Review RFI responses
- Invite vendors to perform demonstrations
- Score vendors based on the RFI responses and vendor demonstrations
- Create Cost Comparison

1.3.3   Deliverables:

- Vendor Scorecard

1.3.4   Milestones:

- Vendor demonstrations are completed to client satisfaction
- Vendor and solution are chosen

1.3.5   Checkpoints:

- Responses evaluated
- Demonstrations scheduled
- Vendors evaluated
- Vendor scorecard completed

1.4   *Business Case/Contract Award* Segment 4

1.4.1   Objective:

A business case and companion presentation will be developed and delivered to the DSG and IRB to secure approval and funding for proceeding with the implementation of the LMS recommendations identified by SFA University team.

1.4.2   Major Tasks:

- Gather costs associated with alternative solutions
- Compare solution costs
- Gather cost associated with the current system
- Create a draft implementation plan
- Prepare presentation for IRB and DSG

1.4.3   Deliverables:

- Business Case
- Draft Implementation Plan

1.4.4   Milestones:

- Funding is approved

1.4.5   Checkpoints:

- Business case is completed
- Presentation to IRB/DSG

2 Definition Phase

Definition Phase Objective

This phase will establish and document the requirements and designs necessary to develop, test, and deploy the solution that will provide the benefits as outlined in the Business Case.

2.1 *Orientation* Segment 1

2.1.1 Objective:

This phase is designed as a transition between the vendor sales/services teams and the SFA/Accenture project team. These activities at the onset of product implementation are suggested to provide broad, general guidance and overall strategic direction to the implementation effort. These meetings should bring together the stakeholders, SFA Representatives from key organizations that have an investment in the implementation, such as Human Resources, SFA University, CIO & CFO, the channels, and the vendor management team as well as the Accenture team.

2.1.2 Major Tasks:

- Establish project team
    - o Identify key project roles and responsibilities
    - o Generate role descriptions, expectations and agreement documents
- Identify and meet with stakeholders (HR, SFA U, CIO, and CFO channels)
- Establish consistent communication with stakeholders (HR, SFA U, CIO, and CFO channels)
- Interview key SFA U representatives to understand existing business processes and customization needs
- Establish meetings with vendor team to exchange information
- Review web standards and guidelines to define necessary modifications to the out-of-the-box application
- Determine and document scope of work
- Create status reporting and project management templates

2.1.3 Deliverables:

- Task Order (TO)
- Statement of Work (SOW)
- Statement of Objectives (SOO)
- Project Work Plan/ Work Breakdown Structure (WBS)
- Project Status Reports Templates
- Role Expectation/Agreement Documents

2.1.4   Milestones:

- Task Order is reviewed/signed off on

2.1.5   Checkpoints:

- Peer and executive sponsors have reviewed the deliverables and have given the go-ahead
- Business Case has been updated

2.2   *Implementation Planning Segment 2*

2.2.1   Objective:

The objective of this segment of work is to have the vendor team and the SFA team establish a joint team structure and a joint implementation plan. In the previous segment, the SFA team structure is established. During this segment, the vendor team and the SFA team establish roles for each team, share existing information, determine the scope of work, and determine the decision points and the decision making process.

The SFA team should share the requirements, the prioritization of those requirements, the existing business processes, and the implementation plan. The vendor should work with the SFA team to determine which of the requirements require only system configuration and which requirements will require customization. It is likely that the vendor will have their own implementation plan, and this plan should be shared with the SFA team. The teams should work together to develop a joint implementation plan.

2.2.2   Major Tasks:

- Provide vendor with orientation session
- Establish joint team structure, including roles and responsibilities
- Establish communication and status plans with vendor
- Review, validate, and prioritize key requirements with vendor
- Review and validate key system metrics and performance indicators
- Review existing implementation plan
- Identify hardware requirements, location of hardware and responsible parties
- Identify high-level milestones
- Develop joint implementation plan
- Develop joint high level workplan

2.2.3   Deliverables:

- Vendor team roles and responsibilities
- Joint implementation plan
- Joint workplan

2.2.4 Milestones:

- Vendor team meeting held
- Roles and communication established
- Joint implementation plan developed
- Joint workplan developed

2.2.5 Checkpoints:

- Implementation plan approved
- Joint workplan approved

2.3 *Change Management Planning* Segment 3

2.3.1 Objective:

During this segment, the change management planning is completed and added to the implementation plan. Change management involves assessing which business processes are impacted by the implementation of the system, and determining how to implement the changes to the business processes. Strategies for implementing business process change include providing process training to impacted staff, as well as providing information regarding changes via regular, planned communications.

During this segment, the pilot implementation of the system is planned. A small conference or training course will be used to test the Learning Management system, and a plan developed for the management of the pilot.

2.3.2 Major Tasks:

- Assess current business processes
- Determine "to-be" business processes
- Determine training requirements
- Develop training plan
- Determine communication requirements
- Develop communication plan
- Develop the pilot plan
- Revise implementation plan to include change management functions

2.3.3 Deliverables:

- "To-be" business processes
- Training plan
- Communication plan
- Pilot plan

2.3.4   Milestones:

- Business process changes identified
- Training plan developed
- Communication plan developed
- Pilot plan approved
- Implementation plan revised

2.3.5   Checkpoints:

- Current business processes reviewed and validated
- To-be business processes approved
- Communication and training plan approved
- Pilot plan approved

3   Construction Phase

Construction Phase Objective

The Construction Phase consists of detailed design, construction and testing efforts, with the intent that the output of these efforts will meet the objectives as outlined in the Business Case. It is in this phase that the technical solution derived in the Definition Phase is implemented. The Design Segment will produce a functional specifications document, which will ensure the design meets the requirements. The Build Segment will carry out all development activities surrounding the customizations and configurations in the functional and technical specification documents. During the Run Segment all configurations and associated customizations will be verified in accordance with the Business Case, as well as, the functional and technical specifications documents that are created.

3.1   Design Segment 1

3.1.1   Objective:

In the Design Phase the core system elements are identified. The Vendor team will meet with key members of the SFA to finalize the system requirements and fully understand both the short term and long term implementation needs. This design phase is used to fully understand the business as well as technical needs in order to adequately develop a comprehensive, finalized set of functional requirements. Out of this Design Phase will come a ***Functional Specification Document***, which will layout the detailed Implementation Plan for the SFA LMS. All hardware acquisition, logistics, and installation timelines and tasks will be highlighted in detail within this document. SFA University will receive this deliverable for review and only after they have signed off on it, will the project progress to the next phase. This step is the most critical to the overall success of the project since it lays the foundation for all future work.

3.1.2   Major Tasks:

- Finalize the system requirements
- Develop the comprehensive, finalized set of functional requirements
- Determine the detailed implementation plan
- Determine all hardware acquisition, logistics, and installation timelines
- Finalize project milestones and set timelines
- Identify and verify technical infrastructure
- Define LMS system settings
- Finalize mitigation plans for any risks
- Perform gap analysis on system functionality
- Capture scope of customizations and evaluate the cost analysis prior to development
- Configure web page to customer specifications
- Document design process
- Create user acceptance, system, integration, and component test scripts

3.1.3   Deliverables:

- Functional Specifications Document
- User Acceptance Test Scripts

3.1.4   Milestones:

- System requirements are finalized
- Detailed Implementation Plan has been submitted and approved
- Project milestones and timeline are set

3.1.5   Checkpoints:

- Client has reviewed the web page customizations
- User Acceptance Testing cycles are planned
- Implementation plan has been updated to incorporate Functional Specifications Document

3.2   Build Segment 2

3.2.1   Objective:

Under this section, all customizations and implementation tasks identified in the ***Functional Specification Document*** are developed and implemented. A ***Technical Specification Document*** will be written that clearly defines the design aspects of the customizations to be made during the implementation. This Technical Specification is the roadmap that will be used by the Vendor Implementation Team to deliver these product customizations.

3.2.2   Major Tasks:

- Write Technical Specification Document
- Review Functional Specifications
- Design Review cycle/schedule
- Configure and customize solution
- Deliver solution and customizations

3.2.3   Deliverables:

- Technical Specifications Document

3.2.4   Milestones:

- Solution is configured and customized!

3.2.5   Checkpoints:

- Client review Technical Specification Document and signs-off

3.3   *Run* Segment 3

3.3.1   Objective:

In this phase, the configurations and associated customizations are verified in accordance with the **Functional Specification Document** and the **Technical Specification Document**. Once configured the application must undergo system and integration testing before the newly developed LMS can move into the Deployment Phase. The User Acceptance Test Script must also be created in accordance with the Business Case and the specifications documents. In this segment a Staging Environment is installed for the necessary system and integration and the configurations and customizations are replicated from the development environment.

3.3.2   Major Tasks:

- Check-off Specifications
- Evaluate configurations and customizations
- Systems Testing
- Integration Testing
- User Acceptance Testing has been planned and coordinated

3.3.3   Deliverables:

- -NA-

3.3.4   Milestones:

- Functional specifications are verified
- Technical specifications are verified
- System Testing is successful
- Integration Testing is successful

3.3.5   Checkpoints:

- System/Integration Testing cycles are recorded and reported
- Test scripts meet specifications documents

3.4 *Integrate* Segment 4

3.4.1 Jamcracker Integration Objective

The LMS will be purchased and integrated onto the Jamcracker platform. The LMS will be configured to meet SFA's needs and integrated onto the Jamcracker platform. A plan for configuration, integration, testing, and support, will be developed.

3.4.2 Major Tasks:

- Contract negotiations with Jamcracker
- Configuration of the LMS
- Integration of the LMS onto the Jamcracker platform

3.4.3 Deliverables:

- N/A

3.4.4 Milestones:

- N/A

3.4.5 Checkpoints:

- N/A

4   Deployment Phase

Deployment Phase Objective

The objective of the Deployment Phase is to place the LMS in production and enable the organization to adopt the LMS solution. The Deployment Phase transitions the LMS from development through the acceptance and approval process into production. At the conclusion of the Deployment Phase, the new LMS is in "Production" for utilization by the user community and the Rollout/Support Phase commences.

4.1   Install Segment 1

4.1.1   Objective:

In this segment a Testing Environment is installed and the configurations and customizations are replicated from the development environment.

4.1.2   Major Tasks:

- Review technical infrastructure for readiness
- Install software in test environment
- Implement Configuration Design
- Migrate the configurations and customizations
- Create the Testing/Staging environment
- Perform component testing
- Document installation process

4.1.3   Deliverables:

- -NA-

4.1.4   Milestones:

- Testing and Staging Environments are operational
- Configurations and customizations are migrated
- Component testing completed

4.1.5   Checkpoints:

- Testing and Staging Environments are operational

4.2   Validate Segment 2

4.2.1   Objective:

Testing is required to ensure that the solution has been configured and customized to meet the pre-determined specifications and customer objectives. In this segment the new LMS will undergo User Acceptance Testing.

4.2.2   Major Tasks:
- Conduct User Acceptance Testing (SFA)
- Conduct reviews and recommendations for solution finalization and deployment
- Fix test bugs, mitigate errors

4.2.3   Deliverables:
- User Acceptance Completed Test Script Sign-offs

4.2.4   Milestones:
- Test bugs and errors are mitigated
- Successful User Acceptance Testing

4.2.5   Checkpoints:
- User Acceptance Testing has been executed and signed-off on

4.3   *Deploy* Segment 3

4.3.1   Objective:
Once the LMS has been created to specifications and has been validated, it is migrated and transitioned into "Production".

4.3.2   Major Tasks:
- Prepare and configure machines and transition to support the administration of the system.
- Create the Production environment and replicate the approved environment
- Facilitate knowledge transfer sessions between the Vendor and Technical teams
- Ensure the system meets criteria to be transitioned to Operations and Maintenance Teams through Application Readiness Review (ARR)
- Ensure that the deployment of the completed solution meets SFA Security Standards
- Complete the Production Readiness Review (PRR) process and obtain sign-off

4.3.3   Deliverables:
- ARR documentation
- PRR documentation (with sign-offs)

4.3.4 Milestones:

- Go Live!

4.3.5 Checkpoints:

- Solution has been successfully deployed
- ARR has taken place
- PRR has taken place

5   Rollout/Support Phase

Rollout/Support Phase Objective

In this phase actions will be taken to ensure that the system's potential is maximized and it's capabilities are optimized for a positive impact on the 25,000+ end-users. The success of the rollout and support of the new LMS system requires planning and forethought. A proper support plan needs to be established to make sure all needs for the on-going development, operations, and maintenance of the new LMS are taken into consideration.

5.1   Maintenance Planning Segment 1

5.1.1   Objective:

In this segment all needs for on-going development, operations, and maintenance of the LMS system will be analyzed and resources, training, and funding necessary to support and maintain the LMS will be determined. Since the solution for the LMS is to use an Application Service Provider, the contract vehicle will account for the funds and the vendor will be responsible for the maintenance of the system.

5.2   Pilot Rollout Segment 2

5.2.1   Objective:

During this segment, a small target group of users is trained on the use of the Learning Management System for a single learning event, such as a conference. The pilot group consists of end users and administrators. Following the training, the end users will use the system to register for training, while the administrators will use the "back-office" functions of the system. Both groups will provide feedback on the use of the system to the project team.

5.2.2   Major Tasks:
- Develop training materials
- Conduct training for pilot group
- Gather pilot group feedback

5.2.3   Deliverables:
- Training materials
- Training sessions
- Pilot group feedback

5.2.4 Milestones:
- Pilot group selected
- Pilot event selected
- Pilot group trained
- Pilot group using the system
- Feedback collected and analyzed

5.2.5 Checkpoints:
- Pilot group and pilot event approved
- Training materials reviewed and approved
- Feedback reviewed and approved

5.3 *Product Training* Segment 3

During this segment all of the users are trained. The user groups consist of the training administrators, who will perform the "back-office" functions of the Learning Management System, such as loading and maintaining the course catalog, and creating reports, and the end users, who will use the LMS to plan, schedule, and record training. The product training section is divided into two segments: one segment to train the training administrators, and one to train all of the end users. Since there are 25,000 end users, a variety of methods will be used to provide information to them. Materials developed for the pilot will be revised and re-used for the larger audience.

5.3.1 Objective:
In this segment the training for all administrative users for the system will take place.

5.3.2 Major Tasks:
- Revise existing administrative training materials
- Coordinate and Facilitate Training Sessions
- Conduct training

5.3.3 Deliverables:
- Training materials

5.3.4 Milestones:
- Administrators have been trained

5.3.5 Checkpoints:
- Training materials reviewed and approved

5.4 *Enterprise Rollout* Segment 4

5.4.1 Objective:

In this segment the training for all administrative users for the system will take place.

5.4.2 Major Tasks:

- Determine departmental implementation waves
- Communicate changes
- Revise existing end user training materials
- Conduct training

5.4.3 Deliverables:

- Training materials
- Communication tools
- Internal Marketing/Promotional Plan
- LMS Benefits and Capabilities

5.4.4 Milestones:

- Departmental rollout is completed
- Communication campaign is completed
- Training is completed
- System is in use

5.4.5 Checkpoints:

- Rollout plan is approved
- Communications are approved
- Training is approved

Once the LMS is rolled out to the entire enterprise, the vendor will continue to follow up on open issues to ensure the operability of the system. The SFA Modernization Partner will continue on-going evaluation of the system to set performance targets and goals in order to optimize the systems' effectiveness. A vendor Service Level Agreement (SLA) will carry out support of the system until the system is retired.